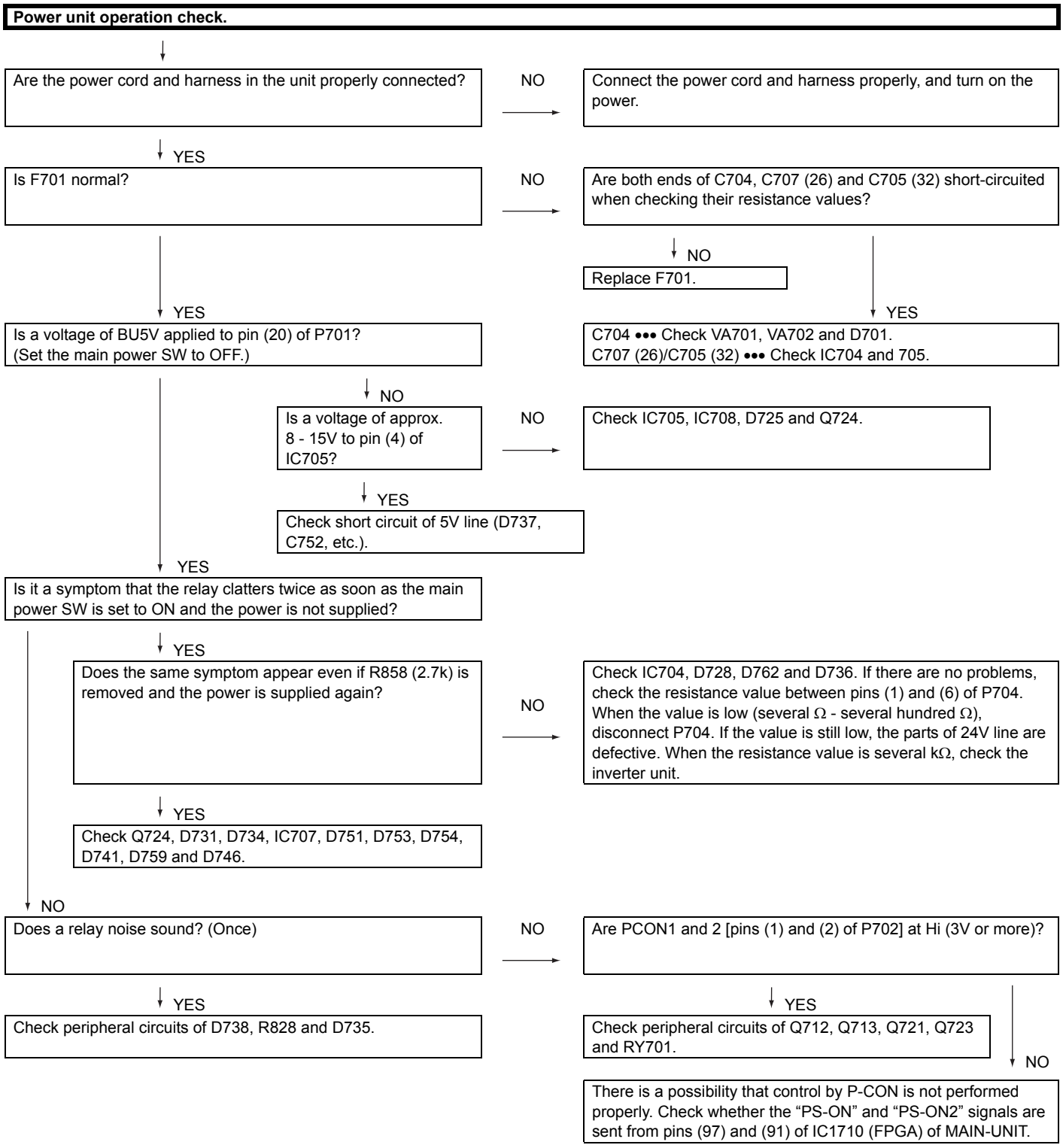
CHAPTER 6. TROUBLESHOOTING TABLE

[1] TROBLESHOOTING TABLE



No sound (1) (during the reception of TV broadcasting)

No audio output during UHF/VHF reception

Checklist;
1) Is the volume set to MIN or MUTE on the remote control? ••• Set the desired volume.
2) Are headphones connected to HEADPHONE (J1301)? ••• Disconnect them.
3) Is ANT-CABLE disconnected or connected improperly? ••• Connect it correctly as per the operation manual.

Is the audio signal (L/R) sent from pins (28) and (27) of IC3002 (VCT)?
- NO → Is the SIF signal (SIF_IN+) sent to pin (31) of IC3002 (VCT)?
  - YES → Check whether +5V and +8V are supplied to pins (33) and (18) of IC3002 respectively. Or, check peripheral circuits.
  - NO → Is the audio signal (SIF) sent from pin (1) of CONNECTOR (SC2705)?
    - YES → Check pin (31) of IC3002 (VCT) and peripheral circuits.
    - NO (TUNER) → Is the audio signal (SIF) sent from pin (12) of IC201 (IF-DEMOD)?
      - YES → Check Q203 (AMP) and peripheral circuits.
      - NO → Is the SIF signal sent to pins (23) and (24) of IC201 (IF-DEMOD)?
        - YES → Check IC201 and peripheral circuits.
        - NO → Is the IF signal sent from pin (8) of TUNER (TU201)?
          - YES → Check FL202 and peripheral circuits.
          - NO → Check whether 5V (CONT) and 5V are supplied to pins (1) and (7) of TUNER (TU201) respectively. Check SDA/SCL and AGC signal.
            - YES → Replace TUNER (TU201).
- YES (AV-UNIT) → Is the audio signal of pins (3) and (5) of IC303 (OP-AMP) sent properly?
  - NO → Check IC303 or peripheral circuits.
  - YES → Is the audio signal of pin (4) Of IC301/IC302 (AUDIO-AMP) sent properly?
    - NO → Check HEAD-PHONE (J1301) or peripheral circuits.
    - YES → Is the audio signal output of pins (2) and (4) of P301 (AUDIO-CONNECTOR) normal?
      - NO → Check P301 (AUDIO-CONNECTOR) and peripheral circuits.
      - YES → Check Speaker (right and left) and wire harness.

No sound from external input devices (2)

↓

No sound from an external input device connected to EXT1 (SCART1).

↓

<EXT1>
Is IN1-L audio signal sent from pin (6) of SCART1 terminal (J1101) to pin (14) of IC3002 (VCT)?
Is IN1-R audio signal sent from pin (2) of SCART1 terminal (J1101) to pin (13) of IC3002 (VCT)?

NO → Check pins (6) and (2) of SCART1 and connection to an external input device.

↓ YES

Is the audio signal properly sent from pins (28) and (27) of IC3002?

NO → Check IC3002 or peripheral circuits.

↓ YES

Is the audio signal of pins (1) and (7) of IC303 (OP-AMP) sent properly?

NO → Check IC303 or peripheral circuits.

↓ YES

Is the audio output signal of pins (13) and (16) of IC302/IC301 (MAIN-AMP) normal?

NO → Check IC302/IC301 (MAIN-AMP), HEADPHONE and peripheral circuits.

↓ YES

Check CONNECTOR (P301) and Speaker (right and left).

No sound from external input devices (2)

↓

No sound from an external input device connected to EXT2 (SCART2).

↓

<EXT2>
Is IN2-L audio signal sent from pin (27) of SCART2 terminal (J1101) to pin (12) of IC3002 (VCT)?
Is IN2-R audio signal sent from pin (23) of SCART2 terminal (J1101) to pin (11) of IC3002 (VCT)?

NO → Check pins (27) and (23) of SCART2 and connection to an external input device.

↓ YES

Is the audio signal properly sent from pins (28) and (27) of IC3002?

NO → Check IC3002 or peripheral circuits.

↓ YES

Is the audio signal of pins (1) and (7) of IC303 (OP-AMP) sent properly?

NO → Check IC303 or peripheral circuits.

↓ YES

Is the audio output signal of pins (13) and (16) of IC302/IC301 (MAIN-AMP) normal?

NO → Check IC302/IC301 (MAIN-AMP), HEADPHONE and peripheral circuits.

↓ YES

Check CONNECTOR (P301) and Speaker (right and left).

No sound from external input devices (2)

No sound from an external input device connected to EXT3.

<EXT3>
Is IN3-L audio signal sent from pin (3) of J1201 terminal to pin (16) of IC3002?
Is IN3-R audio signal sent from pin (5) of J1201 terminal to pin (15) of IC3002?

NO → Check pins (3) (J1201) and (5) (J1201) of EXT3 and connection to an external input device.

YES

Is the audio signal properly sent from pins (28) and (27) of IC3002?

NO → Check IC3002 or peripheral circuits.

YES

Is the audio signal of pins (1) and (7) of IC303 (OP-AMP) sent properly?

NO → Check IC303 or peripheral circuits.

YES

Is the audio output signal of pins (13) and (16) of IC302/IC301 (MAIN-AMP) normal?

NO → Check IC302/IC301 (MAIN-AMP), HEADPHONE and peripheral circuits.

YES

Check CONNECTOR (P301) and Speaker (right and left).

No sound from external input devices (2)

No sound from EXT4 (AUDIO) connecting an external input device.

<EXT4>
Is D-SUB-L audio signal sent from J2702 to pin (15) of IC2704?
Is D-SUB-R audio signal sent from J2702 to pin (2) of IC2704?

YES

Is D-SUB-L audio signal sent to pin (10) of IC3002?
Is D-SUB-R audio signal sent to pin (9) of IC3002?

YES

Is the audio signal properly sent from pins (28) and (27) of IC3002?

NO → Check IC3002 or peripheral circuits.

YES

Is the audio signal of pins (1) and (7) of IC303 (OP-AMP) sent properly?

NO → Check IC303 or peripheral circuits.

YES

Is the audio output signal of pins (13) and (16) of IC302/IC301 (MAIN-AMP) normal?

NO → Check IC302/IC301 (MAIN-AMP), HEADPHONE and peripheral circuits.

YES

Check CONNECTOR (P301) and Speaker (right and left).

No sound from external input devices (2)

↓

No sound from EXT5 (AUDIO) connecting an external input device.

↓

<EXT5>
Is HDMI-L audio signal sent from J2701 to pin (14) of IC2704?
Is HDMI-R audio signal sent from J2701 to pin (5) of IC2704?

↓ YES

Is HDMI-L audio signal sent to pin (10) of IC3002?
Is HDMI-R audio signal sent to pin (9) of IC3002?

NO → Check output of pins (13) and (3) of IC2704 and peripheral circuits.

↓ YES

Check that Option-HDMI Setup-Audio select is set to “Analog”.

↓ OK

Is the audio signal properly sent from pins (28) and (27) of IC3002?

NO → Check IC3002 or peripheral circuits.

↓ YES

Is the audio signal of pins (1) and (7) of IC303 (OP-AMP) sent properly?

NO → Check IC303 or peripheral circuits.

↓ YES

Is the audio output signal of pins (13) and (16) of IC302/IC301 (MAIN-AMP) normal?

NO → Check IC302/IC301 (MAIN-AMP), HEADPHONE and peripheral circuits.

↓ YES

Check CONNECTOR (P301) and Speaker (right and left).

No sound except from speakers (3)

↓

No audio output from the headphones.

↓

Is there audio output on pins (2) and (3) of the headphone terminal (J1301)?

↓ NO

Is audio input/output signal of pins (3) and (5)/(1) and (7) of IC303 (OP-AMP) normal?

↓ NO

Is audio output signal (SPK-OUT L/R) properly sent from pins (28) and (27) of IC3002 (VCT)?

↓ NO

Check audio input signal of pin (31) of IC3002 (VCT), pins (18) and (33) of the power line, pins (84) and (83) of I2C-LINE, and peripheral circuits.

No sound except from speakers (3)

No audio output from EXT1 (SCART) terminal.

Checklist:
1) Is the MUTE button on the remote control set to ON? ••• Set to OFF.
2) Check the connection to external devices. ••• Is there any improper connection?

Is audio signal sent to pins (3) and (1) of EXT1 (J1101)? — YES → Check the connection to EXT1 (J1101) and external devices.

NO

Is S-MUTE-LINE [IC1710 (pin 100)] or S2-MUTE-LINE [IC3003 (pin26)] at H?
(Check Q1106/Q1105 operation.)

NO

Is audio signal sent from pins (24) and (23) of IC3002? — NO → Check the power supply 8/5 V pins (18) and (33) of IC3002 and peripheral circuits.

YES

Check the audio signal output line from pins (24) and (23) of IC3002 to pins (3) and (1) of EXT1.

No sound except from speakers (3)

No audio output from EXT2 (SCART) terminal.

Checklist:
1) Is the MUTE button on the remote control set to ON? ••• Set to OFF.
2) Check the connection to external devices. ••• Is there any improper connection?

Is audio signal sent to pins (24) and (22) of EXT2 (J1101)? — YES → Check the connection to EXT2 (J1101) and external devices.

NO

Is S-MUTE-LINE [IC1710 (pin 100)] at H?
(Check Q1102/Q1101 operation.)

NO

Is audio signal sent from pins (22) and (21) of IC3002? — NO → Check the power supply 8/5 V pins (18) and (33) of IC3002 and peripheral circuits.

YES

Check the audio signal output line from pins (22) and (21) of IC3002 to Q1103/Q1104/Q1201/Q1202.

No sound except from speakers (3)

↓

No audio output from AUDIO OUTPUT terminal.

↓

Checklist:
1) Is the MUTE button on the remote control set to ON? ••• Set to OFF.
2) Check the connection to external devices. ••• Is there any improper connection?

↓

Is audio signal sent to pins (13) and (15) [L/R (white) (red)] of AUDIO OUTPUT terminal (J1201)? — YES → Check the connection to AUDIO OUTPUT terminal (J1201) and external devices.

↓ NO

Is S-MUTE-LINE [IC1710 (pin 100)] at H?
(Check Q1204/Q1203 operation.)

↓ NO

Is audio signal sent from pins (22) and (21) of IC3002? — NO → Check the power supply 8/5 V pins (18) and (33) of IC3002 and peripheral circuits.

↓ YES

Check the audio signal output line from pins (22) and (21) of IC3002 to Q1103/Q1104/Q1201/Q1202.

DTV troubleshooting

The unit does not enter the DTV mode. Or, the DTV menu does not appear.
YES → Go to "The unit does not enter the DTV mode. Or, the DTV menu does not appear."

NO

No video output during DTV reception.
YES → Go to "No video output during DTV reception."

NO

No audio output during DTV reception.
YES → Go to "No audio output during DTV reception."

The unit does not enter the DTV mode. Or, the DTV menu does not appear.

Digital UNIT:
Is a voltage supplied from IC4701(3.3V-REG)/IC4704(1.8V-REG)?
NO → Check peripheral circuits of IC4701/IC4704 and pin(7) of IC4701.

YES

Do X4001/X4002 oscillate?
NO → Check peripheral circuits of X4001/X4002.

YES

D-TUNER UNIT:
Is a voltage of 5V supplied from IC205(SW) and IC206(SW)?
NO → Check peripheral circuits of IC205/IC206.

YES

Is a voltage applied to pin(20) (I2CSEL) of P202?
(High=3.3V)
NO → MAIN UNIT:
Check around the pin (12) of IC1710(FPGA).

YES

Is CLK/DATA signal sent to pins (21) and (22) of P202 and pins (1) and (13) of IC204 (COFDM).
NO → Check peripheral circuits of IC202(COFDM)/ IC4001(D-Processor).

YES

Does X202 oscillate?
NO → Check peripheral circuits of X202.

YES

Check IC202(COFDM)/IC4001(D-Processor).

No video output during DTV reception. Colour of Images are not right.

D-TUNER UNIT:
Is data FED[0:7] sent from pins (3),(4),(5),(6),(8),(9),(10) and (11) of P202?
NO → Check R272 and R273.

YES

DIGITAL UNIT:
Are video signals (R/G/B,CVBS) sent from C4639/C4640/C4641/C4625?
NO → Check R4011(AC8pin),R4013(AC9pin) and IC4001(D-Processor).

YES

Are video signals (R/G/B,CVBS) send from the C4636/C4637/C4638 and emitters of Q4607?
NO → Check Q4601-Q4605,Q4607 and their peripheral circuits.

YES

MAIN UNIT:
Is video signal (CVBS) sent from pin (2) of IC2705(SW).
NO → Check power supply and pin (1) of IC2705(SW).

YES

Are video signals (R/G/B,CVBS) fed from pins (179),(180),(181) and (184) of IC3002?

YES

Are scrambled images not displyed?
YES → DIGITAL UNIT:
Check 5V output of pin (1) of IC4702.
Check 5V of pin (6) of Q4401.

NO

Perform the same check as the model P70E or GD8E.

No audio output during DTV reception. Sound is low.

DIGITAL UNIT:
Is audio signal fed to pins (5) and (10) of IC4604 (OP-AMP)?
NO → Check R4002(AD2pin) and IC4001(D-Processor).

YES

Is audio signal sent from pins (7) and (8) of IC4604 (OP-AMP)?
NO → Check power supply of IC4604(OP-AMP) and its peripheral circuits.

YES

MAIN UNIT:
Is audio signal sent to pin (3) and (13) of IC2704 (SW)?
NO → heck power supply and pins (9) and (10)of IC2704(SW) and audio signal input of pins (4) and (11) of IC2704.

YES

Perform the same check as the model P70E or GD8E.

<On input of the tuner (U/V)> **No picture on the display (1)**

No picture appears on LCD during the tuner (U/V) reception.

Checklist:

1) Is “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” to “TV”.
2) Is MENU-PICTURE-Contrast/Brightness set to “MIN”? ••• Set it to an appropriate level.
3) Is ANT-CABLE disconnected or connected improperly? ••• Connect it correctly as per the operation manual.

YES

Is level of pins (4) and (5) of tuner (TU201) and pins (10) and (11) of IC201 (IF-DEMOD) at H?

NO → These are communications lines for control (I2C). Follow the path and check whether they are forced to L (PULL_DOWN).

YES

Is the video signal (IF) sent from pin (8) of tuner (TU201)?

NO → Check the tuner (TU201) and peripheral circuits.

YES

Is video signal sent from pin (17) of IC201 (IF-DEMOD)?

NO → Check FL201 (SAW-FIL), IC201 and peripheral circuits.

YES

Is the video signal VIN1 (ATUNER-CVBS) sent to pin (191) of IC3002 (VCT)?

NO → Check IC201 (IF-DEMOD), CONNECTOR (P201 /SC2705) and peripheral circuits.

YES

Is LVDS video signal (LVDS_0N/0P-3N/3P) sent to pins (141)/(140) - (129)/(128) of IC3002 (VCTP), and is CLK signal (LVDS_CN/CP) sent to pins (132)/(131)?

NO → Check pins (192)/(170)/(133) of BU3.3V line of IC3002 (VCTP), pins (185)/(169)/(142) of 1.8V line and peripheral circuits.

YES

Is LVDS video signal (LVDS_0N/0P-3N/3P) sent to pins (12)/(13) -(24)/(25) of CONNECTOR CN1 of LCD-CONT-UNIT, and is CLK signal (LVDS_CN/CP) sent to pins (21)/(22)?

NO → Check CONNECTOR (P2305, CN1) and HARNESS WIRE (LV).

YES

Is power (LCD5V) supplied to pins (2) - (5) of CONNECTOR CN1 in LCD-CONT-UNIT?

NO → Is LCD5V supplied to pins (31) - (28) of CONNECTOR (P2305)? Check HARNESS WIRE (LV).

YES

Replace LCD-CONT-UNIT.

<During external connection> **No picture on the monitor (2)**

SCART1:
No picture appears on EXT1 - connected monitor during the tuner (U/V) reception.

Checklist:

1) Are input terminal on back of TV and “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” appropriately.
2) Is the Signal Type (item) in MENU-Option-Input Select equal to Signal Type of an external device? ••• Set it to “CVBS”, “Y/C” or “RGB”.
3) Is ANT-CABLE disconnected or connected improperly? ••• Connect it correctly as per the operation manual.
4) The picture is sent to the monitor in a CVBS signal if the source during display is TV, CVBS or Y/C of EXT1-3.
   When sent by component, etc., that signal is not sent to the monitor.
5) When the monitor picture is not sent and is not displayed on the monitor, refer to “No picture” for each terminal.
6) The video output from EXT1 is not the monitor output (output of the picture now watching).
   The picture of the last selected TV channel is always sent to EXT1. (Specification)

Is video signal sent to pin (19) of SCART1 (J1101)?
YES → Check SCART1, external connection or input setting.

NO ↓

Is video signal (V-OUT1) sent from pin (2) of IC1102 (SW)?
YES → Check SCART1 (J1101) and peripheral circuits.

NO ↓

Is video signal (V-OUT1) sent from pin (195) of IC3002 (VCT)?
YES → Check IC1102 (SW), Connector (P1101, SC2702) and peripheral circuits.

NO ↓

Is video signal (CVBS) sent to pin (191) of IC3002 (VCT)?
YES → Check power supply of IC3002 (VCT) and peripheral circuits.

NO ↓

Is video signal (CVBS) sent from pin (17) of IC201 (IF-DEMOD)?
YES → Check CONNECTOR (P201, SC2705) and peripheral circuits.

NO ↓

Is video signal (IF) sent from pin (8) of tuner (TU201)?
YES → Check IC201, FL201 (SAW-FIL), Q202 and peripheral circuits.

NO ↓

Check 5/5 (CONT) V power supply pins (7) and (11), I2C line pins (5) and (4) of tuner (TU201) and peripheral circuits.

<During external connection> **No picture on the monitor (2)**

SCART2:
No picture from EXT1 appears on EXT2-connected monitor.

NOTE: Normally, if the screen during display is sent to EXT2, no picture is sent to EXT2.

Checklist:

1) Are input terminal on back of TV and “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” appropriately.
2) Is the Signal Type (item) in MENU-Option-Input Select equal to Signal Type of an external device? ••• Set it to “CVBS”, “Y/C” or “RGB”.
3) Is ANT-CABLE disconnected or connected improperly? ••• Connect it correctly as per the operation manual.
4) The picture is sent to the monitor in a CVBS signal if the source during display is TV, CVBS or Y/C of EXT1-3. When sent by component, etc., that signal is not sent to the monitor.
5) When the monitor picture is not sent and is not displayed on the monitor, refer to “No picture” for each terminal.
6) The video output from EXT1 is not the monitor output (output of the picture now watching). The picture of the last selected TV channel is always sent to EXT1. (Specification)

Is video signal sent to pin (40) of SCART2 (J1101)? — YES → Check SCART2, external connection or input setting.

NO

Is video signal (V-OUT2) sent from pin (2) of IC1101 (SW)? — YES → Check SCART2 (J1101) and peripheral circuits.

NO

Is video signal (V-OUT2) sent from pin (194) of IC3002 (VCT)? — YES → Check IC1101 (SW), Connector (P1102, SC2703) and peripheral circuits.

NO

Is video signal (VIN1) from EXT1 sent to pin (190) of IC3002 (VCT)? — YES → Check power supply of IC3002 (VCT) and peripheral circuits.

NO

Check whether video signal is sent to pin (20) of SCART1. — YES → Check SCART1, IC2702 (SW), CONNECTOR (SC2702, P1101) and peripheral circuits.

NO

Check SCART1, external connection or input setting.

<During external connection> **No picture on the monitor (2)**

SCART2:
No picture from EXT3 appears on EXT2- connected monitor.

Checklist:

1) Are input terminal on back of TV and “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” appropriately.
2) Is the Signal Type (item) in MENU-Option-Input Select equal to Signal Type of an external device? ••• Set it to “CVBS”, “Y/C” or “RGB”.
3) Is ANT-CABLE disconnected or connected improperly? ••• Connect it correctly as per the operation manual.
4) The picture is sent to the monitor in a CVBS signal if the source during display is TV, CVBS or Y/C of EXT1-3.
   When sent by component, etc., that signal is not sent to the monitor.
5) When the monitor picture is not sent and is not displayed on the monitor, refer to “No picture” for each terminal.
6) The video output from EXT1 is not the monitor output (output of the picture now watching).
   The picture of the last selected TV channel is always sent to EXT1. (Specification)

Is video signal sent to pin (40) of SCART2 (J1101)? — YES → Check SCART2, external connection or input setting.

NO ↓

Is video signal (V-OUT2) sent from pin (2) of IC1101 (SW)? — YES → Check SCART2 (J1101) and peripheral circuits.

NO ↓

Is video signal (V-OUT2) sent from pin (194) of IC3002 (VCT)? — YES → Check IC1101 (SW), Connector (P1102, SC2703) and peripheral circuits.

NO ↓

Is video signal (VIN7) from EXT3 sent to pin (184) of IC3002 (VCT)? — YES → Check power supply of IC3002 (VCT) and peripheral circuits.

NO ↓

Is video signal (IN3YV) sent to pin (2) of IC1201 (SW)? — YES → Check pin (184) of IC3002 (VCT), CONNECTOR (SC2703, P1102) and peripheral circuits.

NO ↓

Is video signal (CVBS) sent from pin (1) of A/V-TERMINAL (J1201=EXT3)? — YES → Check pin (1) (IN3SW) of IC1201 (SW), power supply and peripheral circuits.

NO ↓

Check A/V-TERMINAL (J1201), external connection or input setting.

<When EXT1 is used for external input> **No picture on the display (3)**

No EXT1-Composite output of the external input system.

Checklist:

1) Is “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” to “EXIT”.
2) Is MENU-PICTURE-CONTRAST/BRIGHTNESS set to “MIN”? ••• Set it to an appropriate level.
3) Check the connection to the external device ••• Connect it correctly as per the operation manual for the device.

Is composite video signal sent to pin (20) of SCART1 (J1101)?
- NO → Check external connection, input setting, SCART1 and peripheral circuits.
- YES ↓

Is composite video signal (VIN_1) sent to input terminal pin (6) of IC2702 (SW)?
- NO → Check CONNECTOR (SC2702/P1101), SCART1 (J1101) and peripheral circuits.
- YES ↓

Is composite video signal (CVBS1=VIN2) sent to input terminal pin (190) of IC3002 (VCT)?
- NO → Check IC2702 (SW) and peripheral circuits.
- YES ↓

Is LVDS signal (LVDS_0N/0P-3N/3P) sent from pins (141) and (140) - (129) and (128) of IC3002 (VCTP), and is CLK signal (LVDS_CN/CP) sent from pins (132) and (131)?
- NO → Check pins (192), (170) and (133) of BU3.3V power line and pins (185), (169) and (142) of BU1.8V power line of IC3002 (VCTP), and peripheral circuits.
- YES ↓

Is LVDS signal (LVDS_0N/0P-3N/3P) sent to pins (12) and (13) - (24) and (25) of CONNECTOR CN1 in LCD-CONT-UNIT, and is CLK signal (LVDS_CN/CP) sent to pins (21) and (22)?
- NO → Check CONNECTOR (P2305, CN1) and HARNESS WIRE (LV).
- YES ↓

Is power (LCD5V) supplied to pins (2) - (5) of CONNECTOR CN1 in LCD-CONT-UNIT?
- NO → Is LCD5V supplied to pins (31) - (28) of CONNECTOR (P2305)? Check HARNESS WIRE (LV).
- YES ↓

Replace LCD-CONT-UNIT.

<When EXT1 is used for external input> **No picture on the display (3)**

No EXT1-RGB output of the external input system.

Checklist:

1) Is “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” to “EXIT”.
2) Is MENU-PICTURE-CONTRAST/BRIGHTNESS set to “MIN”? ••• Set it to an appropriate level.
3) Check the connection to the external device ••• Connect it correctly as per the operation manual for the device.

Is RGB signal sent to pins (15),(11) and (7) of SCART1 (J1101)?
- NO → Check external connection, input setting, SCART1 (J1101) and peripheral circuits.
- YES ↓

Is RGB signal (R1/G1/B1=VIN_6/5/9) sent to input terminal pins (187), (175) and (182) of IC3002 (VCT)?
- NO → Check CONNECTOR (SC2702/P1101), SCART1 (J1101) and peripheral circuits.
- YES ↓

Is LVDS signal (LVDS_0N/0P-3N/3P) sent from pins (141) and (140) - (129) and (128) of IC3002 (VCTP), and is CLK signal (LVDS_CN/CP) sent from pins (132) and (131)?
- NO → Check pins (192), (170) and (133) of BU3.3V power line and pins (185), (169) and (142) of BU1.8V power line of IC3002 (VCTP), and peripheral circuits.
- YES ↓

Is LVDS signal (LVDS_0N/0P-3N/3P) sent to pins (12) and (13) - (24) and (25) of CONNECTOR CN1 in LCD-CONT-UNIT, and is CLK signal (LVDS_CN/CP) sent to pins (21) and (22)?
- NO → Check CONNECTOR (P2305, CN1) and HARNESS WIRE (LV).
- YES ↓

Is power (LCD5V) supplied to pins (2) - (5) of CONNECTOR CN1 in LCD-CONT-UNIT?
- NO → Is LCD5V supplied to pins (31) - (28) of CONNECTOR (P2305)? Check HARNESS WIRE (LV).
- YES ↓

Replace LCD-CONT-UNIT.

<When EXT1 is used for external input> **No picture on the display (3)**

No EXT1-Y/C output of the external input system.

Checklist:
1) Is “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” to “EXIT”.
2) Is MENU-PICTURE-CONTRAST/BRIGHTNESS set to “MIN”? ••• Set it to an appropriate level.
3) Check the connection to the external device ••• Connect it correctly as per the operation manual for the device.

Is Y/C signal sent to pins (20) and (15) of SCART1 (J1101)?
- NO → Check external connection, input setting, SCART1 (J1101) and peripheral circuits.
- YES ↓

Is Y/C signal (VIN1=Y1/C1) sent to input terminal pins (190) and (187) of IC3002 (VCT)?
- NO → Check CONNECTOR (SC2702/P1101), SCART1 (J1101) and peripheral circuits.
- YES ↓

Is LVDS signal (LVDS_0N/0P-3N/3P) sent from pins (141) and (140) - (129) and (128) of IC3002 (VCTP), and is CLK signal (LVDS_CN/CP) sent from pins (132) and (131)?
- NO → Check pins (192), (170) and (133) of BU3.3V power line and pins (185), (169) and (142) of BU1.8V power line of IC3002 (VCTP), and peripheral circuits.
- YES ↓

Is LVDS signal (LVDS_0N/0P-3N/3P) sent to pins (12) and (13) - (24) and (25) of CONNECTOR CN1 in LCD-CONT-UNIT, and is CLK signal (LVDS_CN/CP) sent to pins (21) and (22)?
- NO → Check CONNECTOR (P2305, CN1) and HARNESS WIRE (LV).
- YES ↓

Is power (LCD5V) supplied to pins (2) - (5) of CONNECTOR CN1 in LCD-CONT-UNIT?
- NO → Is LCD5V supplied to pins (31) - (28) of CONNECTOR (P2305)? Check HARNESS WIRE (LV).
- YES ↓

Replace LCD-CONT-UNIT.

<When EXT2 is used for external input> **No picture on the display (4)**

No EXT2-Composite output of the external input system.

Checklist:

1) Is “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” to “EXT2”.
2) Is MENU-PICTURE-CONTRAST/BRIGHTNESS set to “MIN”? ••• Set it to an appropriate level.
3) Check the connection to the external device ••• Connect it correctly as per the operation manual for the device.

Is composite video signal sent to pin (41) of SCART2 (J1101)?
- NO → Check external connection, input setting, SCART2 (J1101) and peripheral circuits.
- YES ↓

Is composite video signal (VIN-2) sent to input terminal pin (4) of IC2702 (SW)?
- NO → Check CONNECTOR (SC2703/PI102), SCART2 (J1101) and peripheral circuits.
- YES ↓

Is composite video signal (CVBS2=VIN2) sent to input terminal pin (190) of IC3002 (VCT)?
- NO → Check IC2702 (SW) and peripheral circuits.
- YES ↓

Is LVDS signal (LVDS_0N/0P-3N/3P) sent from pins (141) and (140) - (129) and (128) of IC3002 (VCT), and is CLK signal (LVDS_CN/CP) sent from pins (132) and (131)?
- NO → Check pins (192), (170) and (133) of BU 3.3V power line and pins (185), (169) and (142) of BU1.8V power line of IC3002 (VCT), and peripheral circuits.
- YES ↓

Is LVDS signal (LVDS_0N/0P-3N/3P) sent to pins (12) and (13) - (24) and (25) of CONNECTOR CN1 in LCD-CONT-UNIT, and is CLK signal (LVDS_CN/CP) sent to pins (21) and (22)?
- NO → Check CONNECTOR (P2305, CN1) and HARNESS WIRE (LV).
- YES ↓

Is power (LCD5V) supplied to pins (2) - (5) of CONNECTOR CN1 in LCD-CONT-UNIT?
- NO → Is LCD5V supplied to pins (31) - (28) of CONNECTOR (P2305)? Check HARNESS WIRE (LV).
- YES ↓

Replace LCD-CONT-UNIT.

<When EXT2 is used for external input> **No picture on the display (4)**

No EXT2-RGB output of the external input system.

Checklist:

1) Is “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” to “EXT2”.
2) Is MENU-PICTURE-CONTRAST/BRIGHTNESS set to “MIN”? ••• Set it to an appropriate level.
3) Check the connection to the external device ••• Connect it correctly as per the operation manual for the device.

Is RGB signal sent to pins (36), (32) and (28) of SCART2 (J1101)?
NO → Check external connection, input setting, SCART2 (J1101) and peripheral circuits.

YES

Is RGB signal (R2/G2/B2=VIN_15/16/17) sent to Input terminal pins (178), (177) and (176) of IC3002 (VCT)?
NO → Check CONNECTOR (SC2703/P1102), SCART2 (J1101) and peripheral circuits.

YES

Is LVDS signal (LVDS_0N/0P-3N/3P) sent from pins (141) and (140) - (129) and (128) of IC3002 (VCT), and is CLK signal (LVDS_CN/CP) sent from pins (132) and (131)?
NO → Check pins (192), (170) and (133) of BU 3.3V power line and pins (185), (169) and (142) of BU1.8V power line of IC3002 (VCT), and peripheral circuits.

YES

Is LVDS signal (LVDS_0N/0P-3N/3P) sent to pins (12) and (13) - (24) and (25) of CONNECTOR CN1 in LCD-CONT-UNIT, and is CLK signal (LVDS_CN/CP) sent to pins (21) and (22)?
NO → Check CONNECTOR (P2305, CN1) and HARNESS WIRE (LV).

YES

Is power (LCD5V) supplied to pins (2) - (5) of CONNECTOR CN1 in LCD-CONT-UNIT?
NO → Is LCD5V supplied to pins (31) - (28) of CONNECTOR (P2305)? Check HARNESS WIRE (LV).

YES

Replace LCD-CONT-UNIT.

<When EXT2 is used for external input> **No picture on the display (4)**

No EXT2-Y/C output of the external input system.

Checklist:

1) Is “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” to “EXT2”.
2) Is MENU-PICTURE-CONTRAST/BRIGHTNESS set to “MIN”? ••• Set it to an appropriate level.
3) Check the connection to the external device ••• Connect it correctly as per the operation manual for the device.

Is Y/C signal sent to pins (41) and (36) of SCART2 (J1101)?

NO → Check external connection, input setting, SCART2 (J1101) and peripheral circuits.

YES ↓

Is Y/C signal (VIN2 =Y2/C2) sent to input terminal pins (190) and (178) of IC3002 (VCT)?

NO → Check CONNECTOR (SC2703/P1102), SCART2 (J1101) and peripheral circuits.

YES ↓

Is LVDS signal (LVDS_0N/0P-3N/3P) sent from pins (141) and (140) - (129) and (128) of IC3002 (VCT), and is CLK signal (LVDS_CN/CP) sent from pins (132) and (131)?

NO → Check pins (192), (170) and (133) of BU 3.3V power line and pins (185), (169) and (142) of BU1.8V power line of IC3002 (VCT), and peripheral circuits.

YES ↓

Is LVDS signal (LVDS_0N/0P-3N/3P) sent to pins (12) and (13) - (24) and (25) of CONNECTOR CN1 in LCD-CONT-UNIT, and is CLK signal (LVDS_CN/CP) sent to pins (21) and (22)?

NO → Check CONNECTOR (P2305, CN1) and HARNESS WIRE (LV).

YES ↓

Is power (LCD5V) supplied to pins (2) - (5) of CONNECTOR CN1 in LCD-CONT-UNIT?

NO → Is LCD5V supplied to pins (31) - (28) of CONNECTOR (P2305)? Check HARNESS WIRE (LV).

YES ↓

Replace LCD-CONT-UNIT.

<When EXT3 is used for external input> **No picture on the display (5)**

No EXT3 output of the external input system.

Checklist:

1) Is “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” to “EXT3”.
2) Is MENU-PICTURE-CONTRAST/BRIGHTNESS set to “MIN”? ••• Set it to an appropriate level.
3) Check the connection to the external device ••• Connect it correctly as per the operation manual for the device.

Is composite video signal sent to pin (1) of A/V-IN-TERMINAL (J1201)?
NO → Check external connection, input setting, A/V-IN-TERMINAL (J1201) and peripheral circuits.

YES

Is composite video signal (IN3-CVBS) sent to input terminal pin (4) of IC1201 (SW)?
NO → Check A/V-IN-TERMINAL (J1201) and peripheral circuits.

YES

Is composite video signal (CVBS=VIN7) sent to input terminal pin (184) of IC3002 (VCT)?
NO → Check CONNECTOR (SC2703/P1102), IC3002 (VCT) and peripheral circuits.

YES

Is LVDS signal (LVDS_0N/0P-3N/3P) sent from pins (141) and (140) - (129) and (128) of IC3002 (VCTP), and is CLK signal (LVDS_CN/CP) sent from pins (132) and (131)?
NO → Check pins (192), (170) and (133) of BU3.3V power line and pins (185), (169) and (142) of BU1.8V power line of IC3002 (VCTP), and peripheral circuits.

YES

Is LVDS signal (LVDS_0N/0P-3N/3P) sent to pins (12) and (13) - (24) and (25) of CONNECTOR CN1 in LCD-CONT-UNIT, and is CLK signal (LVDS_CN/CP) sent to pins (21) and (22)?
NO → Check CONNECTOR (P2305, CN1) and HARNESS WIRE (LV).

YES

Is power (LCD5V) supplied to pins (2) - (5) of CONNECTOR CN1 in LCD-CONT-UNIT?
NO → Is LCD5V supplied to pin (31) - (28) of CONNECTOR (P2305)? Check HARNESS WIRE (LV).

YES

Replace LCD-CONT-UNIT.

<When EXT3 is used for external input> **No picture on the display (5)**

No EXT3-Y/C output of the external input system.

Checklist:

1) Is “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” to “EXT3”.
2) Is MENU-PICTURE-CONTRAST/BRIGHTNESS set to “MIN”? ••• Set it to an appropriate level.
3) Check the connection to the external device ••• Connect it correctly as per the operation manual for the device.

Is Y/C signal sent to pins (11) and (7) of S-TERMINAL (J1201)?
NO → Check external connection, input setting, S-TERMINAL (J1201) and peripheral circuits.

YES

Is Y3 signal (IN3-Y) sent to Input terminal pin (6) of IC1201 (SW)?
NO → Check S-TERMINAL (J1201) and peripheral circuits.

YES

Is Y/C signal (VIN7/VIN8) sent to input terminal pins (184) and (183) of IC3002 (VCT)?
NO → Check CONNECTOR (SC2703/P1102), IC3002 (VCT) and peripheral circuits.

YES

Is LVDS signal (LVDS_0N/0P-3N/3P) sent from pins (141) and (140) - (129) and (128) of IC3002 (VCTP), and is CLK signal (LVDS_CN/CP) sent from pins (132) and (131)?
NO → Check pins (192), (170) and (133) of BU3.3V power line and pins (185), (169) and (142) of BU1.8V power line of IC3002 (VCTP), and peripheral circuits.

YES

Is LVDS signal (LVDS_0N/0P-3N/3P) sent to pins (12) and (13) - (24) and (25) of CONNECTOR CN1 in LCD-CONT-UNIT, and is CLK signal (LVDS_CN/CP) sent to pins (21) and (22)?
NO → Check CONNECTOR (P2305, CN1) and HARNESS WIRE (LV).

YES

Is power (LCD5V) supplied to pins (2) - (5) of CONNECTOR CN1 in LCD-CONT-UNIT?
NO → Is LCD5V supplied to pin (31) - (28) of CONNECTOR (P2305)? Check HARNESS WIRE (LV).

YES

Replace LCD-CONT-UNIT.

<When EXT4 is used for external input> **No picture on the display (6)**

No EXT4 (15pin-D-SUB terminal) output of the external input system.

Checklist:

1) Is “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual set “INPUT SOURCE” to “EXT4”.
2) Connect the included D-SUB-Adapter-Cable to the COMPONENT terminal of an external device. ••• See the operation manual (use a commercially available Component-Cable to connect to the external device).
3) Is ANT-CABLE disconnected or connected improperly? ••• Connect it correctly as per the operation manual.

YES

Is “EXT4” selected with “INPUT SOURCE” button on the remote control?

NO → Select “EXT4” with “INPUT SOURCE” button on the remote control.

YES

Is D-SUB-COMPONENT signal (PCV_R/G/B) sent to pins (1), (2) and (3) of EXT4-TERMINAL (SC2303)?

NO → Check D-SUB-adaptor and external connection.

YES

Is D-SUB-COMPONENT signal (PCV_R/G/B=VIN19/20/21) sent to pins (174), (173) and (172) of IC3002 (VCT)?

NO → Check EXT4-TERMINAL and peripheral circuits.

YES

Is LVDS signal (LVDS_0N/0P-3N/3P) sent from pins (141) and (140) - (129) and (128) of IC3002 (VCTP), and is CLK signal (LVDS_CN/CP) sent from pins (132) and (131)?

NO → Check pins (192), (170) and (133) of BU3.3V power line and pins (185), (169) and (142) of BU1.8V power line of IC3002 (VCTP), and peripheral circuits.

YES

Is LVDS signal (LVDS_0N/0P-3N/3P) sent to pins (12) and (13) - (24) and (25) of CONNECTOR CN1 in LCD-CONT-UNIT, and is CLK signal (LVDS_CN/CP) sent to pins (21) and (22)?

NO → Check CONNECTOR (P2305, CN1) and HARNESS WIRE (LV).

YES

Is power (LCD5V) supplied to pins (2) - (5) of CONNECTOR CN1 in LCD-CONT-UNIT?

NO → Is LCD5V supplied to pins (31) - (28) of CONNECTOR (P2305)? Check HARNESS WIRE (LV).

YES

Replace LCD-CONT-UNIT.

<When EXT5 is used for external input> **No picture on the display (7)**

No EXT5 (HDMI) output of the external input system.

Checklist:

1) Is “INPUT SOURCE” button on the remote control set up correctly? ••• See the operation manual and set “INPUT SOURCE” to “EXT5”.
2) Have you checked the type video signal sent from HDMI-connected external device? ••• Confirm the type (it should “RGB”, “YCbCr 4:4:4” or “YCbCr 4:2:2”).
3) Have you checked the type of Color Matrix sent from HDMI-connected external device? ••• Confirm the type (it should be “ITU601” or “ITU709”.)
4) Is ANT-CABLE disconnected or connected improperly? ••• Connect it correctly as per the operation manual.

YES

Is “EXT5” selected with “INPUT SOURCE” button on the remote control?

NO → Select “EXT5” with “INPUT SOURCE” button on the remote control.

YES

Is the type of video signal (Signal Type) from HDMI-connected external device set?

NO → From MENU-Option-HDMI Setup-Signal Type, select a signal type (“RGB”, “YCbCr 4:4:4” or “YCbCr 4:2:2”).

YES

Is the type of color signal (Color Matrix) from HDMI-connected external device set?

NO → From Option-HDMI Setup-Color Matrix, select a color signal type (“AUTO”, “ITU601” or “ITU709”)

YES

Is TMDS data (RX*±signal) sent to pins (1) - (12) of EXT5 (HDMI) terminal (SC1901)?

NO → Is I2C signal (SDA/SCL signal) sent to pins (16) and (15) of EXT5 (HDMI) terminal?
Check external connection and peripheral circuits.

YES

Is 8bit-DIGITAL signal (HDMI- R/G/B) sent from pins (110) - (144) of IC1905 (HDMI-RECEIVER)?

NO → Check power supply (3.3/1.8V) pins (99) and (74) of IC1905, SDA/SCL signal pins (29) and (30), and peripheral circuits.

YES

Is 8bit-DIGITAL signal (HDMI- R/G/B) sent to pins (73) - (50) of IC3002 (VCT)?

NO → Check SDA3/SCL3 signal pins (27) and (28), interface between IC1905 and IC3002, and peripheral circuits.

YES

Is LVDS signal (LVDS_0N/0P-3N/3P) sent from pins (141) and (140) - (129) and (128) of IC3002 (VCTP), and is CLK signal (LVDS_CN/CP) sent from pins (132) and (131)?

NO → Check pins (192), (170) and (133) of BU3.3V power line and pins (185), (169) and (142) of BU1.8V power line of IC3002 (VCTP), and peripheral circuits.

YES

Is LVDS signal (LVDS_0N/0P-3N/3P) sent to pins (12) and (13) - (24) and (25) of CONNECTOR CN1 in LCD-CONT-UNIT, and is CLK signal (LVDS_CN/CP) sent to pins (21) and (22)?

NO → Check CONNECTOR (P2305,CN1) and HARNESS WIRE (LV).

YES

Is power (LCD5V) supplied to pins (2) - (5) of CONNECTOR CN1 in LCD-CONT-UNIT?

NO → Is LCD5V supplied to pins (31) - (28) of CONNECTOR (P2305)? Check HARNESS WIRE (LV).

YES

Replace LCD-CONT-UNIT.

<26/32”> **Backlight failure to light up**

Do all the fluorescent tubes light up?
- NO → Check the individual fluorescent tubes for light-up failure
  - YES → Replace any defective fluorescent tube (s) with new one (s).
- YES ↓

Is the power supplied to the inverter unit?
- NO → Check the connection between power unit and inverter unit.
- YES ↓

Is the fuse in the inverter unit circuit functioning?
- NO → Replace the blown-out fuse on the inverter unit.
  Turn on the power again.
  If the fuse gets blown out again, check the short-circuited
  - YES → Check drive trans and their peripheral circuits as well as drive FET and their peripheral circuits.
- YES ↓

Is the VCC power supplied to the inverter control IC on the inverter unit?
- NO → Check the circuit connected with the VCC terminal on the inverter control IC.
- YES ↓

Are there control signals (INV-ON, INV-BRT, PWM-SEL) at CN3 on the inverter unit?
- NO → Are there the INV-ON and INV-BRT signals at P704 on the power unit, and the (INV-ON and INV-BRT) signals at SC1702 on the main PWB?
  - NO → Check pins (97) and (91) of IC1710 (main PWB).
- YES ↓

Is the specified control signal inputted at INV-CTL-IC on the inverter unit?
- NO → Check the line between CN3 and INV-CTL-IC.
- YES ↓

Are the DRIVE-FET at the primary side of DRIVE-TRANS functioning?
- NO → Replace INV-CTL-IC or check its peripheral circuits.
- YES ↓

Is the secondary circuit of DRIVE-TRANS functioning?
- NO → Replace the DRIVE-TRANS for the fluorescent tubes, or check their peripheral circuits.

LCD failure	→	Does a single or several vertical stripes appear on the LCD screen?	→	Replace the LCD panel.
LCD failure	→	Does a single or several horizontal stripes appear on the LCD screen?	→	Replace the LCD panel.
LCD failure	→	Do luminescent or black dots appear on the screen?	→	Replace the LCD panel.
LCD failure	→	Is the on-screen image rippling or distorted?	→	Replace the LCD panel.
LCD failure	→	The backlight functions. Does not the image come out in the LCD screen (screen black)?	→	Replace the LCD control unit
LCD failure	→	Does the entire LCD screen look whitish all over?	→	Replace the LCD control unit
LCD failure	→	Does the QS drive function?	→	Replace the LCD control unit
LCD failure	→	Are there data bit drop-outs? (No solution even when turning on and off the QS drive)	→	Replace the LCD control unit
LCD failure	→	Is the gamma correction as specified?	→	Replace the LCD control unit